

43 Lecture - MTH101

Important Subjective

What is the comparison test for convergence of infinite series?

Answer: The comparison test for the convergence of an infinite series is a method of determining whether a given series converges or diverges by comparing it with another series.

What is the ratio test for convergence of infinite series?

Answer: The ratio test is a convergence test for infinite series. It states that if the limit of the ratio of consecutive terms of a series is less than 1, then the series converges absolutely.

What is the root test for convergence of infinite series?

Answer: The root test is a convergence test for infinite series. It states that if the limit of the n th root of the absolute value of the n th term of a series is less than 1, then the series converges absolutely.

What is the integral test for convergence of infinite series?

Answer: The integral test is a convergence test for infinite series. It states that if the integral of the function corresponding to the series converges, then the series converges.

What is the alternating series test for convergence of infinite series?

Answer: The alternating series test is a convergence test for infinite series in which the terms alternate in sign. It states that if the absolute value of the terms decrease monotonically to 0, then the series converges.

What is the alternating series error bound?

Answer: The alternating series error bound is an estimate of the error involved in approximating the sum of an alternating series with a finite number of terms.

What is the Cauchy condensation test for convergence of infinite series?

Answer: The Cauchy condensation test is a convergence test for infinite series. It states that if the terms of a series decrease monotonically to 0, then the series converges if and only if the corresponding series obtained by taking the sum of powers of 2 of the terms converges.

What is the absolute convergence test for infinite series?

Answer: The absolute convergence test is a convergence test for infinite series. It states that if the absolute value of each term of a series converges, then the series converges absolutely.

What is the p-series test for convergence of infinite series?

Answer: The p-series test is a convergence test for infinite series of the form $1/n^p$, where p is a positive number. It states that if $p > 1$, then the series converges; if $p \leq 1$, then the series diverges.

What is the limit comparison test for convergence of infinite series?

Answer: The limit comparison test is a method of determining whether a given series converges or diverges by comparing it with another series. It states that if the limit of the ratio of the terms of the two series is a positive constant, then the two series either both converge or both diverge.